

# LITHOLOGIC DESCRIPTION OF SAMPLES SUBMITTED FOR ASSAY

Core samples from Savage Oil Shale Development Company's Love corehole, drilled 876 feet N. 63° E. of SW corner of sec. 19, T. 4 S., R. 98 W., Garfield County, Colorado

Surface elevation 8450 feet

From	To	Description
0	11.7	No recovery.
11.7	34.6	Siltstone, tan and light gray, massive. 13 feet missing at 18 feet.
34.6	48.5	Sandstone, light gray and light brown, massive to poorly-defined bedding. 3.5 feet missing.
48.5	53.7	Siltstone, light gray, massive.
53.7	91.0	Sandstone, tan and light gray, fine- to medium-grained, poorly-defined to well-defined bedding.
91.0	96	Missing.
96	100	Siltstone, gray and tan, poorly-defined and contorted bedding.
100	123.5	Sandstone, light gray, fine- to medium-grained, massive to thinly bedded. 10 feet missing within interval.
123.5	155	Siltstone, tan and light gray, massive to poorly-defined bedding.
155	169.5	Siltstone, tan and light gray, well-defined bedding.
169.5	170	Oil shale, lean, light brown and greenish-brown, poorly-defined bedding.
170	181.2	Siltstone, gray and tan, poorly-defined to well-defined bedding.
181.2	186.0	Oil shale, lean, light brown and light gray, poorly-defined to well-defined bedding.
186.0	220.5	Siltstone, gray to tan, poor to well-defined bedding. Rare gray sandstone streaks.
220.5	223.0	Sandstone, light gray, fine grained, massive to faintly bedded.
223.0	228.0	Siltstone, light gray, massive. Rare gray sandstone streaks.
228.0	236.8	Siltstone, gray, massive to poorly-defined bedding.
236.8	242.0	Sandstone, gray, massive, medium-grained in upper part to very fine-grained and silty in lower part.
242.0	259.0	Siltstone, light gray, poorly-defined bedding, sandy in lower part.
259.0	270.0	Sandstone, light gray, massive to poorly-defined bedding, fine-grained to silty. A two-inch band of brown and dark gray oil shale occurs at 268.7 feet. Common one-half-inch and less inclusions of pyrite.
270.0	272	Siltstone, light gray, massive. Rare stringers of brown marlstone.
272	274	Sandstone, light gray, fine-grained, massive.

V B, B L. Short

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Laramie Petroleum Research Center, Laramie, Wyoming

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Core samples from Savage Oil Shale Development Company's Love corehole, drilled 876 feet N. 63° E. of SW corner of sec. 19, T. 4 S., R. 98 W., Garfield County, Colorado (Con.)

Surface elevation 8450 feet

From	To	Description
274	287	Siltstone, light gray, massive to poorly-defined bedding, sandy in part. A two-inch band of brown and dark gray oil shale occurs at 277.3 feet. A one-half-inch band of dark brown oil shale occurs at 278.3 feet.
287	289.5	Sandstone, light gray, fine to medium-grained, massive to poorly-defined bedding.
289.5	322.0	Siltstone, light gray, massive, sandy in part.
322.0	364	Siltstone, light gray, poorly-defined to well-defined bedding.
364	390.5	Marlstone, light gray and light brown, well defined bedding, silty.
390.5	392.5	Oil shale, lean to medium, light brown, dark brown, and dark gray, well-defined bedding.
392.5	399.0	Marlstone, light gray, tan, and light brown, poorly defined to well-defined bedding. Interbedded with light gray siltstone.
399.0	402.3	Marlstone, tan and light brown, well-defined bedding.
402.3	405.3	Marlstone, tan and light gray, well-defined bedding, silty. Interbedded with gray and light gray siltstone.
405.3	408.8	Marlstone, tan and light brown, well-defined bedding. A 0.5-foot dirty white tuff bed containing 0.1 foot of dark gray oil shale occurs at 407.4 feet.
408.8	411.1	Oil shale, lean to medium, light brown, dark brown and dark gray, massive to well-defined bedding. A 0.1-foot light gray tuff bed occurs at 410.0 feet.
411.1	421.0	Marlstone, tan and light brown, massive to well-defined bedding. Grades to thin beds of lean oil shale. Zones containing abundant crystal cavities occur at 411.1 to 413.1 feet and 419.6 to 420.1 feet.
421.0	422.6	Oil shale, lean, light brown and reddish-brown, well-defined bedding.
422.6	431	Marlstone, tan and light brown, massive to well-defined bedding.
431	432.5	Marlstone, tan and light brown, well-defined bedding. Light gray tuff stringers.
432.5	443.6	Siltstone, light gray, massive to poorly-defined bedding. Common stringers of tan marlstone.

Illustration No. SBR-3250P

# LITHOLOGIC DESCRIPTION OF SAMPLES SUBMITTED FOR ASSAY

Core samples from Savage Oil Shale Development Company's Love corehole,  
drilled 876 feet N. 63° E. of SW corner of sec. 19, T. 4 S., R. 98 W.,  
Garfield County, Colorado (Con.)

Surface elevation 8450 feet

From	To	Description
443.6	446.0	Oil shale, lean to medium, light brown and dark brown, massive to well-defined bedding.
446.0	452.3	Sandstone, light gray, massive, fine-grained to silty.
452.3	454.7	Marlstone, light gray, tan and light brown, well-defined bedding. Grades to lean oil shale in lower part.
454.7	456.2	Siltstone, light gray, massive to poorly-defined bedding. Common bands and stringers of light brown marlstone.
456.2	459.8	Marlstone, tan and light brown, well-defined bedding. Grades to thin beds of dark brown, lean oil shale.
459.8	461.4	Tuff bed, light gray, very fine grained. Contains thin, extremely contorted beds of light brown marlstone.
461.4	463.0	Marlstone, light gray and light brown, well defined bedding. Vertically fractured.
463.0	466.0	Oil shale, lean to medium, light brown and dark brown, well-defined bedding. Rare two-inch and less tan tuff beds.
466.0	468.6	Marlstone, light gray, tan and light brown, well-defined bedding.
468.6	471.0	Oil shale, medium, dark brown and dark gray, well-defined bedding.
471.0	475.7	Oil shale, lean, tan and light brown, well-defined bedding.
475.7	484.8	Oil shale, lean to medium, dark brown and dark gray, massive to well-defined bedding.
484.8	489.0	Oil shale, lean, light brown and dark brown, well-defined bedding.
489.0	502.0	Oil shale, medium, dark brown and dark gray, well-defined bedding; 0.1-foot tan tuff beds occur at 491 feet and at 491.4 feet.
502.0		Bottom of hole.

Illustration No. SBR-3251P

Laramie Petroleum Research Center, Laramie, Wyoming

May 10, 1960

# LITHOLOGIC DESCRIPTION OF SAMPLES SUBMITTED FOR ASSAY<sup>1</sup>

Core samples from Savage Oil Shale Development Company's Quinn corehole,  
drilled 3640 feet N. 3° E. of S. 1/4 corner sec. 35, T. 4 S., R. 98 W.,  
Garfield County, Colo.

Surface elevation 8536 feet

From	To	Description
0	8	No recovery.
8	22	Sandstone, tan and light gray, fine to medium-grained, massive. 1.3 feet lost within this interval.
22	26.6	Sandstone, tan, fine to medium-grained, massive.
26.6	29.0	Sandstone, tan, fine to medium-grained, massive, highly carbonaceous.
29.0	32	Sandstone, tan, medium-grained, massive. 1.5 feet missing between 22 and 32 feet.
32	42.0	Sandstone, tan and light gray, medium-grained, massive. 0.3 foot missing between 32 and 42 feet.
42.0	46.0	Sandstone, tan, medium-grained, massive.
46.0	48.0	Siltstone, tan, massive. 0.5 foot missing between 42 and 48 feet.
48.0	53.5	Siltstone, tan and gray, massive. 0.65 foot missing between 48 and 53.5 feet.
53.5	57.0	Siltstone, light gray and tan, massive. A 0.3-foot band of gray limestone occurs at 54.3 feet.
57.0	60.0	Sandstone, tan and light gray, medium-grained, massive. 1.75 feet missing between 53.5 and 60.0 feet.
60.0	63.0	Sandstone, light gray, medium-grained, massive to faintly bedded.
63.0	67.0	Sandstone, light gray and tan, medium-grained. Interbedded with gray siltstone.
67.0	73.5	Siltstone, gray, massive, calcareous. 1.7 feet missing between 60 and 73.5 feet.
73.5	90.0	Siltstone, tan and light gray, massive, calcareous. 1.1 feet missing between 73.5 and 90 feet.
90.0	93	Siltstone as above.
93	93.5	Oil shale, lean, tan, light brown, and dark brown, well defined bedding.
93.5	94.0	Missing.
94.0	108.0	Siltstone, light gray, massive to well defined bedding.
108.0	123	Sandstone, light gray, fine to medium-grained, massive to well defined bedding.
123	130	Siltstone, tan and light gray, massive. 1.20 feet missing between 110 and 130 feet.
130	137	Sandstone, light gray and reddish-brown, coarse-grained, massive.

*I By B. L. Short*

Illustration No. SBR-3242P

Laramie Petroleum Research Center, Laramie, Wyoming

May 4, 1960

# LITHOLOGIC DESCRIPTION OF SAMPLES SUBMITTED FOR ASSAY

Core samples from Savage Oil Shale Development Company's Quinn corehole,  
drilled 3640 feet N. 3° E. of S. 1/4 corner sec. 35, T. 4 S., R. 98 W.,  
Garfield County, Colo. (Con.)

Surface elevation 8536 feet

From	To	Description
137	150	Siltstone and fine-grained sandstone, light gray, massive to poorly defined bedding. One foot lost between 137 and 150 feet.
150	166	Siltstone and sandstone as above.
166	170	Sandstone, tan and yellowish-brown, coarse-grained, massive. One foot missing between 150 and 170 feet.
170	178.5	Sandstone, tan and yellowish-brown, coarse-grained, massive.
178.5	190.0	Siltstone and fine-grained sandstone, light gray, massive to poorly-defined, wavy bedding. 1.5 foot missing between 170 and 190 feet.
190.0	202.5	Siltstone and sandstone as above.
202.5	205.5	Sandstone, light gray, fine-grained, calcareous. Black carbonaceous partings.
205.5	210.0	Sandstone, light gray, fine to medium-grained, massive. 1.7 feet missing between 190 and 210 feet.
210.0	224	Sandstone, fine to medium-grained, massive to poorly defined bedding, carbonaceous. 0.93 foot missing between 214 and 224 feet.
224	234	As above. 0.5 foot missing.
234	243	As above.
243		Total depth.

Illustration No. SBR-3243P

Laramie Petroleum Research Center, Laramie, Wyoming

May 4, 1960